

Amendments to the Claims:

1. (Currently amended) A circuit, comprising:

a measurement circuit coupled to receive a first input signal from a first antenna of a remote transmitter and coupled to receive a second input signal from a second antenna of the remote transmitter, each of the first and second input signals being transmitted at a first time, the measurement circuit producing an output signal corresponding to a ~~magnitude~~ at least one of the first and second input signals; and

a control circuit coupled to receive the output signal and a reference signal, the control circuit arranged to produce a control signal at a second time in response to a comparison of the output signal and the reference signal.

2. (Original) A circuit as in claim 1, wherein each of the first and second input signals comprise at least one pilot symbol.

3. (Original) A circuit as in claim 2, wherein each of the first and second input signals is a wideband code division multiple access signal.

4. (Currently amended) A circuit as in claim 3, wherein the output signal comprises a sum of the magnitude of each of the first and second input signals and wherein ~~each of~~ the control signal comprises at least one transmit power control signal.

5. (Original) A circuit as in claim 3, wherein the output signal comprises a first output signal and a second output signal, the first output signal corresponding to a magnitude of the first input signal and the second output signal corresponding to a magnitude of the second input signal and wherein the control signal comprises at least one transmit power control signal.

6. (Original) A circuit as in claim 5, wherein the at least one transmit power control signal comprises a first and a second transmit power control signal, each of the first and second transmit power control signals set to control transmit power of respective said first and second antennas.

7. (Currently amended) A circuit as in claim 1, further comprising an estimate circuit coupled to receive at least a first predetermined signal and a second predetermined signal from the remote transmitter source, each of the first and second predetermined signals having respective predetermined values, the estimate circuit producing at least one of the first estimate signal and the second estimate signal in response to the first and second predetermined signals.
8. (Original) A circuit as in claim 7, wherein each of the first and second predetermined signals are pilot symbols.
9. (Original) A circuit as in claim 8, wherein the measurement circuit, the control circuit and the estimate circuit are formed on a single integrated circuit.
10. (Original) A circuit as in claim 8, wherein each of the first and second estimate signals is a Rayleigh fading parameter estimate.
11. (Original) A circuit as in claim 8, wherein a total path diversity of each of the first and second symbol estimates is at least twice a number of transmitting antennas.
12. (Currently amended) A circuit as in claim 1, wherein the measurement circuit is further coupled to receive a third input signal from a third antenna of the remote transmitter and coupled to receive a fourth input signal from a fourth antenna of the remote transmitter, each of the third and fourth input signals being transmitted at the first time, and wherein the output signal further corresponds to ~~a magnitude~~ at least one of the third and fourth input signals.
13. (Original) A circuit as in claim 12, wherein each of the input signals comprise at least one pilot symbol.
14. (Original) A circuit as in claim 12, wherein each of the input signals is a wideband code division multiple access signal.

15. (Original) A circuit as in claim 12, wherein the output signal corresponds to a sum of magnitudes of the input signals.

16. (Original) A circuit as in claim 12, wherein the control signal comprises at least one transmit power control signal.

17. (Original) A circuit, comprising:

a measurement circuit coupled to receive a first input signal from a first antenna of a transmitter at a first time and coupled to receive a second input signal from a second antenna of the transmitter at a third time, the measurement circuit producing a first output signal corresponding to a magnitude of the first input signal and producing a second output signal corresponding to a magnitude of the second input signal; and

a control circuit coupled to receive the first and second output signals and a reference signal, the control circuit arranged to produce a first control signal at a second time after the first time in response to a comparison of the first output signal and the reference signal, the control circuit arranged to produce a second control signal at a fourth time after the third time in response to a comparison of the second output signal and the reference signal.

18. (Original) A circuit as in claim 17, wherein each of the first and second input signals comprise at least one pilot symbol.

19. (Original) A circuit as in claim 17, wherein each of the first and second control signals comprise at least one transmit power control signal.

20. (Original) A circuit as in claim 17, wherein each of the first and second input signals is a wideband code division multiple access signal.

21. (Original) A circuit as in claim 17, further comprising an estimate circuit coupled to receive at least a first predetermined signal and a second predetermined signal from the transmitter source,

each of the first and second predetermined signals having respective predetermined values, the estimate circuit producing the first estimate signal and the second estimate signal in response to the first and second predetermined signals.

22. (Currently amended) A method of processing signals for a communication system, comprising the steps of:

receiving a plurality of input signals being transmitted at a first time, the plurality of input signals corresponding to a respective plurality of antennas at a remote transmitter;

measuring each input signal of the plurality of input signals and producing at least one output signal;

comparing the at least one output signal to a reference signal;

producing at least one control signal in response to the step of comparing; and

transmitting the at least one control signal at a second time.

23. (Original) A method of processing signals as in claim 22, further comprising the steps of:

receiving a plurality of predetermined signals from the plurality of antennas; and

producing a channel estimate in response to the plurality of predetermined signals.

24. (Original) A method of processing signals as in claim 23, wherein the at least one control signal comprises at least one transmit power control signal and wherein the plurality of predetermined signals comprise pilot symbol signals.

25. (Currently amended) A method of processing signals for a communication system, comprising the steps of:

receiving at least one control signal transmitted from an external source at a first time;

producing a transmit power level ~~of each~~ corresponding to at least one of a plurality of antennas in response to the control signal; and

transmitting a plurality of signals to the external source at a respective said transmit power level at a second time from a respective said plurality of antennas.

26. (Original) A method of processing signals as in claim 25, wherein the at least one control signal comprises at least one transmit power control signal.
27. (Original) A method of processing signals as in claim 26, wherein the respective said transmit power level has a same transmit power adjustment for each of said plurality of antennas in response to one transmit power control signal.
28. (Original) A method of processing signals as in claim 26, wherein the at least one transmit power control signal includes a plurality of transmit power control signals, and wherein the respective said transmit power level for each of said plurality of antennas is set by a respective transmit power control signal of the plurality of transmit power control signal.
29. (Previously added) A method of processing signals, comprising the steps of:
selecting a diversity pattern having plural elements corresponding to plural signal sources and plural times;
selecting a symbol pattern having a plurality of symbols corresponding to plural signal sources and plural times;
producing an overlay of each element of the diversity pattern with the symbol pattern.
30. (Previously added) A method as in claim 29, wherein each element of the diversity pattern is one of a true and a complement of another element in the diversity pattern.
31. (Previously added) A method as in claim 29, wherein each symbol of the symbol pattern is at least one of a true, a complement and a conjugate of another symbol in the symbol pattern.
32. (Previously added) A method as in claim 29, further comprising the steps of:
transmitting a first symbol of the symbol pattern corresponding to a first element of the diversity pattern from a first antenna at a first time;
transmitting a second symbol of the symbol pattern corresponding to the first element of the diversity pattern from a second antenna at the first time;

transmitting a fifth symbol of the symbol pattern corresponding to a second element of the diversity pattern from a third antenna at the first time; and

transmitting a sixth symbol of the symbol pattern corresponding to the second element of the diversity pattern from a fourth antenna at the first time.

33. (Previously added) A method as in claim 32, further comprising the steps of:

transmitting a third symbol of the symbol pattern corresponding to the first element of the diversity pattern from the first antenna at a second time;

transmitting a fourth symbol of the symbol pattern corresponding to the first element of the diversity pattern from the second antenna at the second time;

transmitting a seventh symbol of the symbol pattern corresponding to the second element of the diversity pattern from the third antenna at the second time; and

transmitting an eighth symbol of the symbol pattern corresponding to the second element of the diversity pattern from the fourth antenna at the second time.

34. (Previously added) A method as in claim 29, further comprising the steps of:

transmitting a first symbol of the symbol pattern corresponding to a first element of the diversity pattern from a first antenna at a first time;

transmitting a second symbol of the symbol pattern corresponding to the first element of the diversity pattern from a second antenna at the first time;

transmitting a fifth symbol of the symbol pattern corresponding to a second element of the diversity pattern from a third antenna at a third time; and

transmitting a sixth symbol of the symbol pattern corresponding to the second element of the diversity pattern from a fourth antenna at the third time.

35. (Previously added) A method as in claim 34, further comprising the steps of:

transmitting a third symbol of the symbol pattern corresponding to the first element of the diversity pattern from the first antenna at a second time;

transmitting a fourth symbol of the symbol pattern corresponding to the first element of the diversity pattern from the second antenna at the second time;

transmitting a seventh symbol of the symbol pattern corresponding to the second element of the diversity pattern from the third antenna at a fourth time; and

transmitting an eighth symbol of the symbol pattern corresponding to the second element of the diversity pattern from the fourth antenna at the fourth time.

36. (Previously added) A method as in claim 34, further comprising the steps of:
not transmitting from the third and the fourth antennas during a part of the first time; and
not transmitting from the first and the second antennas during a part of the third time.

37. (Previously added) A method of processing signals, comprising the steps of:
receiving an overlay pattern of transmitted symbols from plural signal sources at plural times;

decoding the overlay pattern according to a diversity pattern having plural elements corresponding to plural signal sources and plural times; and

decoding the overlay pattern according to a symbol pattern having a plurality of symbols corresponding to plural signal sources and plural times, the symbol pattern corresponding to each of plural elements of the diversity pattern.

38. (Previously added) A method as in claim 37, wherein each element of the diversity pattern is one of a true and a complement of another element in the diversity pattern.

39. (Previously added) A method as in claim 37, wherein each symbol of the symbol pattern is at least one of a true, a complement and a conjugate of another symbol in the symbol pattern.

40. (Previously added) A method as in claim 37, further comprising the steps of:
receiving a first symbol of the symbol pattern corresponding to a first element of the diversity pattern from a first antenna at a first time;

receiving a second symbol of the symbol pattern corresponding to the first element of the diversity pattern from a second antenna at the first time;

receiving a fifth symbol of the symbol pattern corresponding to a second element of the diversity pattern from a third antenna at the first time; and

receiving a sixth symbol of the symbol pattern corresponding to the second element of the diversity pattern from a fourth antenna at the first time.

41. (Previously added) A method as in claim 40, further comprising the step of decoding the first, second, fifth and sixth symbols.

42. (Previously added) A method as in claim 40, further comprising the steps of:

receiving a third symbol of the symbol pattern corresponding to the first element of the diversity pattern from the first antenna at a second time;

receiving a fourth symbol of the symbol pattern corresponding to the first element of the diversity pattern from the second antenna at the second time;

receiving a seventh symbol of the symbol pattern corresponding to the second element of the diversity pattern from the third antenna at the second time; and

receiving an eighth symbol of the symbol pattern corresponding to the second element of the diversity pattern from the fourth antenna at the second time.

43. (Previously added) A method as in claim 37, further comprising the steps of:

receiving a first symbol of the symbol pattern corresponding to a first element of the diversity pattern from a first antenna at a first time;

receiving a second symbol of the symbol pattern corresponding to the first element of the diversity pattern from a second antenna at the first time;

receiving a fifth symbol of the symbol pattern corresponding to a second element of the diversity pattern from a third antenna at a third time; and

receiving a sixth symbol of the symbol pattern corresponding to the second element of the diversity pattern from a fourth antenna at the third time.

44. (Previously added) A method as in claim 43, further comprising the steps of:
not decoding a symbol from the third and the fourth antennas during the first time; and
not decoding from the first and the second antennas during the third time.
45. (Previously added) A method as in claim 43, further comprising the steps of:
receiving a third symbol of the symbol pattern corresponding to the first element of the diversity pattern from the first antenna at a second time;
receiving a fourth symbol of the symbol pattern corresponding to the first element of the diversity pattern from the second antenna at the second time;
receiving a seventh symbol of the symbol pattern corresponding to the second element of the diversity pattern from the third antenna at a fourth time; and
receiving an eighth symbol of the symbol pattern corresponding to the second element of the diversity pattern from the fourth antenna at the fourth time.